

Name: _____

Date: _____ Per: _____



Meiosis Webquest

Go to: <http://learn.genetics.utah.edu/content/begin/tour/oldtour.html>
Click on the link labeled “What is mitosis/meiosis?”

Review - When do we need new cells in our body?

The human body is made up of about _____ cells, but we each began as _____ cell.

Cells reproduce themselves by _____.

How does the “mother” cell compare to the resulting “daughter” cells?

Before cells divide, cells must make some preparations.

Most human cells are _____, meaning they have _____ complete sets of 23 chromosomes (total of _____ chromosomes).

Before dividing, what must the mother cell do?

This is important so that each daughter cell receives _____ complete sets of chromosomes, just like the original mother cell.

This cell division is called _____.

A cell with only one complete set of chromosomes is called _____.

These cells are made through a type of cell division called _____. It begins with one _____ mother cell (total of _____ chromosomes).

The daughter cells produce _____ haploid cells.

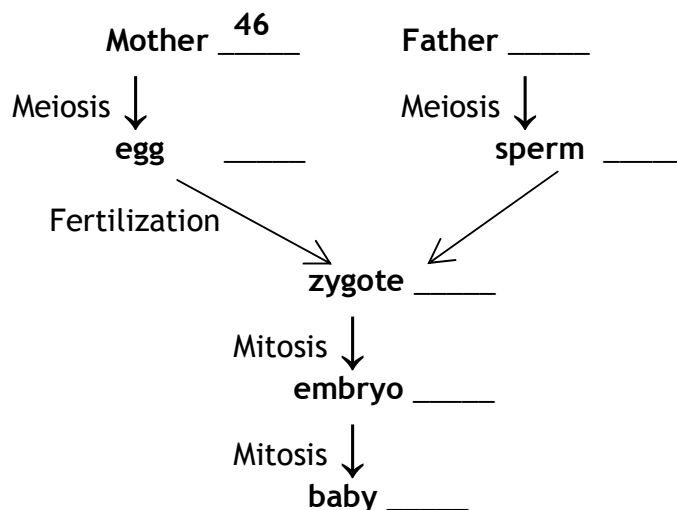
Why would we need haploid cells?

Meiosis is used to produce haploid _____ and _____ cells, which means each of these cells contains _____ chromosomes.

When a sperm cell fuses with an egg cell, the resulting cell is now diploid (total of _____ chromosomes) and is called a _____.

What's the difference between mitosis and meiosis?

Based on the information from this website, fill in the following diagram with the appropriate number of chromosomes at each stage during development. The first blank is provided for you as an example.



Go to: <http://www.sumanasinc.com/webcontent/animations/content/meiosis.html>

Read the introduction. Explain one main difference between sexual and asexual reproduction.

Click the tab labeled “**Animation.**”

1. DNA replication takes place when? _____
2. Meiosis consists of two cell divisions: _____ & _____
3. Centrosomes (aka centrioles) migrate to _____.
4. The pairing of homologous chromosomes is called _____.
5. Crossing over points are called _____.
6. What happens in metaphase I?
7. What happens during anaphase I?
8. In prophase II, each cell is [diploid / haploid]. (*circle one*)
9. In metaphase II, chromosomes line up in [single / double] file. (*circle one*)
10. What happens during telophase II?

Click the tab labeled “**Conclusion.**”

Describe the 4 daughter cells produced after meiosis.

Click on the tab labeled “**Quiz.**”

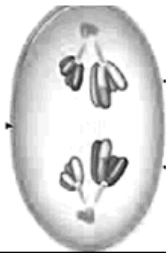
1. With respect to meiosis, when does DNA replication occur? _____
2. When does crossing over occur? _____
3. During which phase do chromosomes line up along the equator? _____
4. During which phase does the nuclear membrane form around the chromosomes?

Go to: http://www.pbs.org/wgbh/nova/baby/divi_flash.html


After viewing the animation that compares two types of cell division (meiosis and mitosis), fill out the chart below, by placing a check in the box or boxes to indicate when each event occurs. Some events might have checks for both mitosis and meiosis.

| | Mitosis | Meiosis |
|---|---------|---------|
| Two cell divisions | | |
| Centrioles appear | | |
| Homologous chromosomes pair up | | |
| Spindle fibers form | | |
| One cell division | | |
| Cytokinesis | | |
| Two daughter cells are formed | | |
| Daughter cells are identical to original cell | | |
| Chromosomes replicate before cell division | | |
| Four daughter cells are formed | | |

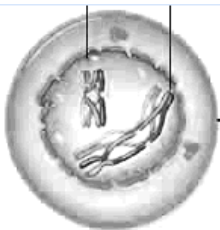
Can you identify each phase in meiosis?



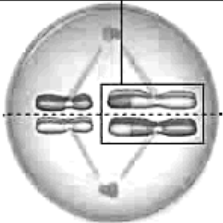
1.



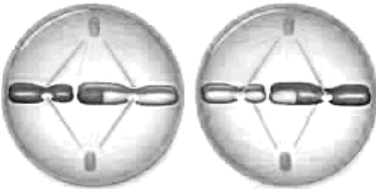
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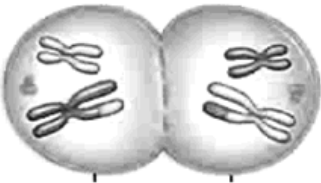
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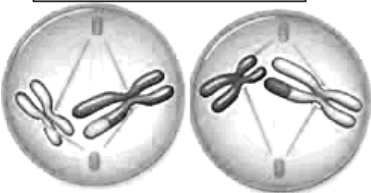
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6.



7.



8.